and infinitely intelligent, it must be an infinite subject, object, or self-conscious intellect."

We do not perceive that the inference expressed in 2 (above) is a necessary one; in fact, it is obtained by a confusion of object with subject; therefore 3 cannot be sustained.

We heartily agree with the following brief survey of scientific philosophy (p. 200): "The dualistic and teleological philosophy of Paley belongs to the past; the mechanical and monistic philosophy of Spencer and Haeckel belongs to the present, but is rapidly moving into the past; the *teleological and monistic* philosophy of the scientific method and the organic theory of evolution belong to the future, and will soon be here." We add to this our own belief that a part of this philosophy is contained in Dr. Abbot's book; that some of the rest of it is also here we will endeavor to show in the next number of the NATURALIST.—*E. D. Cope.*

MICROSCOPY.[1]

The Naples Water-Bath.—Drs. Mayer,[2] Giesbrecht, and Vosmaer have recently constructed a new water-bath for imbedding in paraffine, which differs in many particulars from the one hitherto employed in the Naples Zoological Station. H. Jung, of Heidelberg, furnishes the whole apparatus, including a small water-bath for imbedding under the simple microscope, at sixty-five marks (sixteen dollars and twenty-five cents). In this price the regulator is reckoned at eight marks and each thermometer at two and a half marks. Orders for the water-bath and its accessories are filled by the Educational Supply Co., 6 Hamilton Place, Boston.

This is the most thoroughly equipped water-bath that has thus far been described, and it is admirably well adapted, in size and shape as well as outfit, to those micro-technical uses for which it was designed.

One of the more important improvements in the outfit is the new Bunsen burner (*r*), which consists of a horizontal tube, to one end of which is attached a short, vertical gas-burner. The burner is fixed in a movable stand 3.5 cm. high. The gas-burner only rises to the height of the stand, so that the bath requires to be raised only 4 cm. The bath is thus placed at a height most convenient for work and most favorable to economy of heat. The flame does not smoke, and does not strike back when reduced to its lowest point. With a maximum flame the bath, which has a capacity of 2.5 litres, is brought to a temperature of 60° C. in thirty to forty-five minutes.

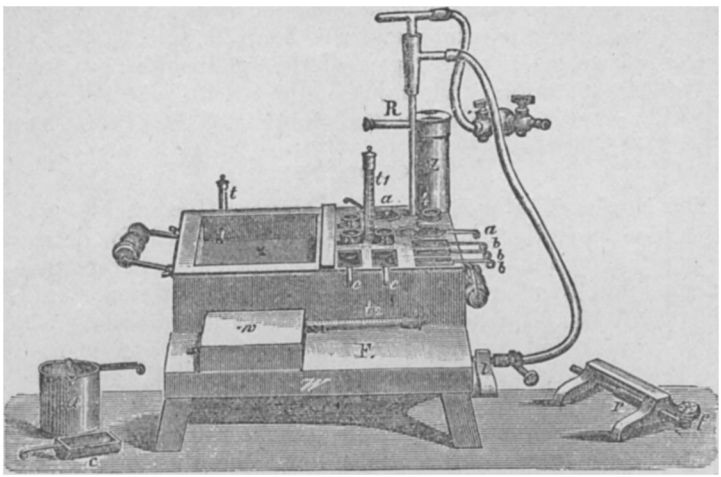
Another important attachment of this water-bath is the thermo-regulator. A full explanation of this part is furnished with each

[1] Edited by C. O. WHITMAN, Milwaukee, Wisconsin.

[2] Dr. Paul Mayer, "Aus der Mikrotechnik," *Internationale Monatsschrift f. Anat. u. Phys.*, iv., H. 2, 1887.

instrument. By means of the regulator the temperature can be kept very nearly constant day and night, the variation being less than one degree with a uniform gas-pressure.

The bath is filled (best with distilled water) through the tube Z, which can be unscrewed for transportation. The tube is made large to guard against the overflow of water during heating, and is covered with a cap to protect aginst dust and to prevent evaporation. While pouring in the water, the bath should be held a little obliquely, so as to allow the air to escape, and the receiving-tube should be left empty.



The deep basins (*a*) are designed for keeping a ready supply of melted paraffine, while the smaller, half-cylindrical basins (*b* and *c*) serve to hold the objects during the process of infiltration with paraffine, or, if the term may be allowed, during the process of *paraffinizing*.[1]

For imbedding very large objects special dishes may be required. Large watch-glasses, or better glass dishes, serve well for such objects, and they can be kept in the large air-bath (*x*). Suitable dishes can also be made by any tinman from white iron-plate. Brass dishes are not recommended, as they are corroded by turpentine.

The air-bath, when kept open, has a temperature about ten degrees lower than that of the water-bath, and is thus a convenient place for the slow evaporation of chloroform, benzol, etc. It is only necessary for this purpose to place the dish containing the paraffine solution and the object on some support (*e.g.*, a cork ring) that will keep it from contact with the bottom or sides of the air-bath.

[1] After the analogy of albuminize, paraffinize would mean to cover, or impregnate, with paraffine.

The small water-bath, for imbedding minute objects under the microscope, has two openings, each of which is connected with a caoutchouc tube about 50 cm. long. The bath is filled by placing one of these tubes in a basin of water and sucking through the other. When the bath is full, the second tube is placed with the first in the basin of water, and the bath is heated on the table (F) or in the air-bath (x), the burner being used, eventually, to aid in bringing the temperature to the point desired. The watch-glass or other glass dish containing the object in melted paraffine is next placed on the bath, with a slip of white or colored paper, according to need, beneath it; and the orientation of the object is then undertaken with the greatest ease. This accomplished, one of the caoutchouc tubes (the lower) is removed from the basin of water and allowed to hang over the corner of the work-table; the hot water is thus drained off and replaced with cold, so that the paraffine cools quickly without the least disturbance of the object.

SCIENTIFIC NEWS.

—The "Circolo degle Aspiranti Naturalisti" of Naples will hereafter be known as the "Societa dei Naturalisti." With this change in name they begin the publication of a bulletin.

—Dr. Pierre, after many years of labor, has completed his work on the Flora of Cochin China. In recognition of this fact the government of the province has granted him a life pension of six thousand francs.

—Dr. W. Zoff has been appointed ordinary professor of botany in the University of Halle.

—Dr. G. Berthold accepts the position of ordinary professor of botany at Göttingen.

—Dr. Karl Brandt, of Königsberg, becomes interim director of the Zoological Institute of the University of Kiel.

—Dr. E. Korschelt, of Freiburg, has been appointed assistant in the Zoological Institute of the University of Berlin.

—In the January number of the AMERICAN NATURALIST we noted the death of Edgar von Harold, one of the authors of the valuable "Catalogus Coleopterorum." Dr. Max Gemminger, his associate in that laborious undertaking, has since died. For many years he had held the position of conservator of the Zoological Museum at Munich.

—Edward T. Hardman, a member of the Geological Survey of Ireland, died in Dublin, April 30. In 1883–86 he travelled extensively in West Australia, and added not a little to our knowledge of the geological features of that region.